

ABSTRACT OF THE DISCLOSURE

A variable gain amplifier device controlled by a first gain control signal comprises a gain controlled amplifier having a gain and including a differential pair of first and second MOS type transistors configured to operate in a weak inversion region; and a control signal converter configured to convert the first gain control signal into a second gain control signal, and supply the second gain control signal to the gain controlled amplifier to exponentially vary the gain with respect to the first gain control signal.